

## ABSTRACT

An UTOPIA-LVDS Bridge is a flexible UTOPIA to LVDS Bridge device. The LVDS Bridge transparently transports the UTOPIA bus over a high speed LVDS serial link. The device includes many reliability features such as an optional 1:1 protection and built in bit error rate checking. A parallel interface is user programmable for maximum flexibility. The user can choose between UTOPIA Level 2 ATM Layer (master) or PHY Layer 14 (slave) operation. The UTOPIA-LVDS Bridge supports a special MPHY (multi-PHY Layer 14) operation mode. The MPHY operation supports up to 248 standard UTOPIA Level 2 PHY ports without adding external circuitry. The serial interface uses LVDS Serializer and Deserializer technology. The 16:1 bit serialization allows conveying the full-duplex parallel bus over two differential transmission pairs. Bus LVDS technology also enables multi-drop configurations for distributing the UTOPIA bus to multiple Bridge receivers.